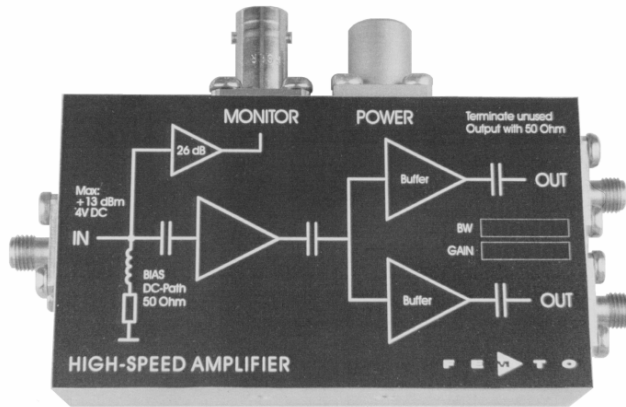


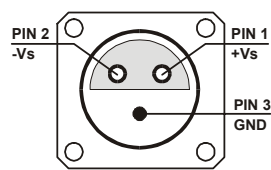
2 GHz High-Speed Amplifier



<p>Features</p>	<ul style="list-style-type: none"> • Bandwidth 10 kHz ... 2 GHz • Rise Time 175 ps • Gain 20 dB (500 V/A) • Input VSWR 1 : 1.15 • Integrated Bias Circuit • Monitor Output • Two identical Signal Outputs 																																	
<p>Applications</p>	<ul style="list-style-type: none"> • Preamplifier for ultra-fast Detectors (Microchannel-Plates, Photomultipliers, Avalanche-Photodiodes, PIN-Photodiodes etc.) • Oscilloscope and Transient-Recorder Preamplifier • Time-Resolved Pulse and Transient Measurements 																																	
<p>Block Diagram</p>																																		
<p>Specifications</p>	<table border="0"> <tr> <td></td> <td><i>Test Conditions</i></td> <td><i>Vs = ± 15 V, Ta = 25°C, System Impedance = 50 Ω</i></td> </tr> <tr> <td rowspan="3">Gain</td> <td>Gain</td> <td>20 dB (500 V/A)</td> </tr> <tr> <td>Gain Accuracy</td> <td>± 1 dB</td> </tr> <tr> <td>Gain Flatness</td> <td>± 0.2 dB</td> </tr> <tr> <td rowspan="2">Frequency Response</td> <td>Lower Cut-Off Frequency</td> <td>10 kHz</td> </tr> <tr> <td>Upper Cut-Off Frequency</td> <td>2 GHz</td> </tr> <tr> <td>Time Response</td> <td>Rise / Fall Time (10% - 90%)</td> <td>175 ps</td> </tr> <tr> <td rowspan="7">Input</td> <td>DC Input Impedance</td> <td>50 Ω</td> </tr> <tr> <td>RF Input Impedance</td> <td>50 Ω</td> </tr> <tr> <td>50 Ω Noise Figure</td> <td>5.2 dB (@ f < 1 GHz)</td> </tr> <tr> <td>Equivalent Input Voltage Noise</td> <td>680 pV/√Hz (@ f < 1 GHz)</td> </tr> <tr> <td>Equivalent Input Current Noise</td> <td>13.6 pA/√Hz (@ f < 1 GHz)</td> </tr> <tr> <td>Input VSWR</td> <td>1 : 1.15 (@ f < 1.5 GHz)</td> </tr> <tr> <td>Maximum Input VSWR</td> <td>1 : 1.35 (@ f < 3 GHz)</td> </tr> </table>		<i>Test Conditions</i>	<i>Vs = ± 15 V, Ta = 25°C, System Impedance = 50 Ω</i>	Gain	Gain	20 dB (500 V/A)	Gain Accuracy	± 1 dB	Gain Flatness	± 0.2 dB	Frequency Response	Lower Cut-Off Frequency	10 kHz	Upper Cut-Off Frequency	2 GHz	Time Response	Rise / Fall Time (10% - 90%)	175 ps	Input	DC Input Impedance	50 Ω	RF Input Impedance	50 Ω	50 Ω Noise Figure	5.2 dB (@ f < 1 GHz)	Equivalent Input Voltage Noise	680 pV/√Hz (@ f < 1 GHz)	Equivalent Input Current Noise	13.6 pA/√Hz (@ f < 1 GHz)	Input VSWR	1 : 1.15 (@ f < 1.5 GHz)	Maximum Input VSWR	1 : 1.35 (@ f < 3 GHz)
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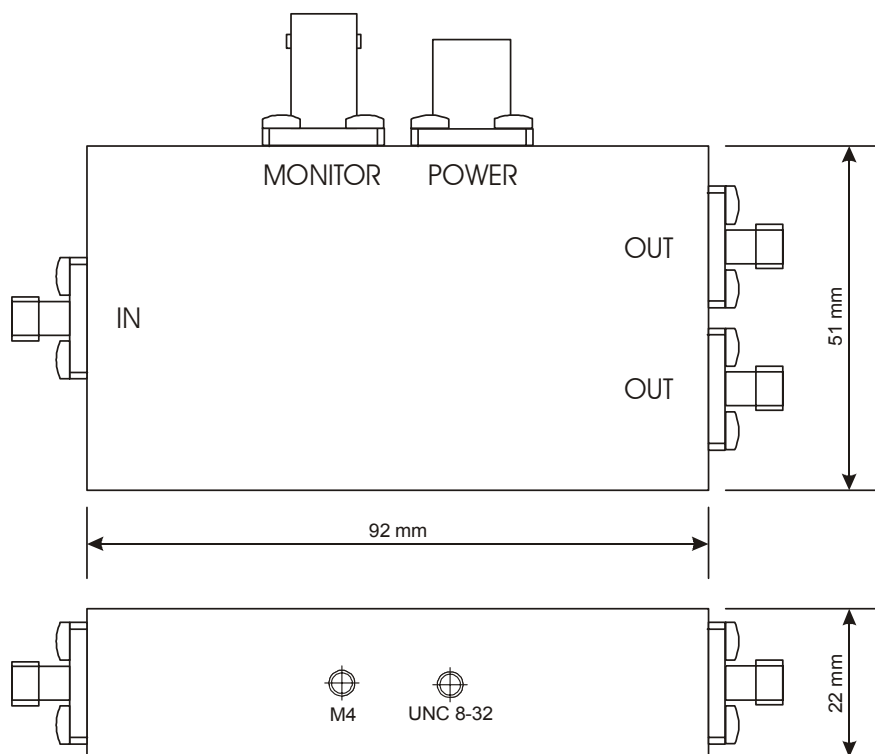
2 GHz High-Speed Amplifier

Output	Two identical Signal Outputs: Output Impedance 50 Ω Maximum Output VSWR 1 : 2.5 (@ f < 3 GHz) Output Power P _{1dB} + 12.5 dBm (@ f < 1 GHz) Output Peak-Peak Voltage 2.5 Vpp (@ f < 500 MHz, for linear Amplification) Isolation between Outputs 15 dB (@ f < 3 GHz)
Monitor Amplifier	Gain 26 dB (1 kV/A) Lower Cut-Off Frequency DC Upper Cut-Off Frequency 100 kHz Output Voltage ± 10 V (@ 10kΩ load)
Power Supply	Supply Voltage ± 15 V Supply Current + 160 / -10 mA
Case	Weight 180 gr. (0.41 lbs) Material AlMg4.5Mn, nickel-plated
Temperature Range	Storage Temperature - 40 ... + 100 °C Operating Ambient Temperature 0 ... + 60 °C Operating Case Temperature 37 °C (@ Ta = 25 °C)
Absolute Maximum Ratings	Power Supply Voltage ± 20 V DC and LF Input Voltage ± 4 V RF Input Power + 13 dBm
Connectors	Input SMA Signal Outputs SMA Monitor Output BNC Power Supply LEMO Series 1S, 3-pin fixed Socket Pin 1: + 15 V Pin 2: - 15 V Pin 3: GND



2 GHz High-Speed Amplifier

Dimensions



DZ01-0611-10

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